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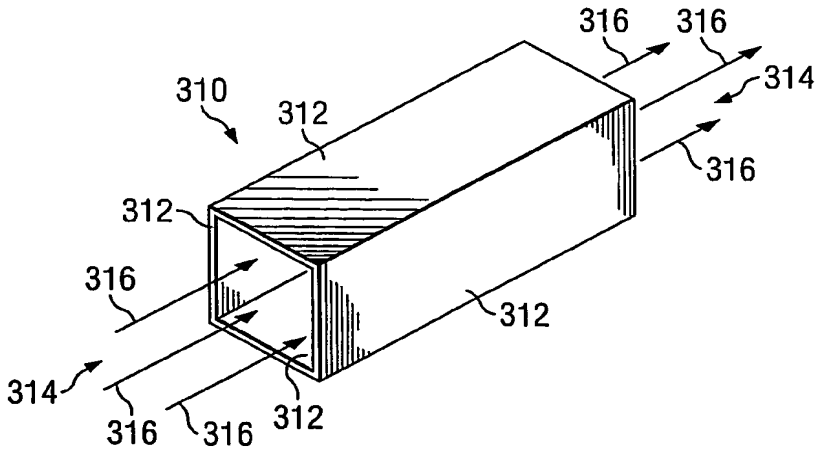
(54) Title: APPARATUS AND METHOD FOR FLUID FLOW MEASUREMENT WITH SENSOR SHIELDING



(57) Abstract: Methods and apparatuses for detecting radial flows of conductive fluid are provided. In an embodiment of the present invention, shields are used to prevent or reduce circulating electrical currents from causing a voltage difference that would adversely affect the measured voltage difference between two adjacent electrodes. The shields may be a conduit through which conductive fluid may flow. Groups of sensors, e.g., two or more, may be placed within the shield. The shields may have any cross-section shape. Generally, once the circulating electrical current flow between the electrode pairs is substantially reduced or eliminated, only the voltage difference from the localized induced electric field remains. This way, a true induced voltage may be measured, and thus an accurate value for the fluid velocity may be determined.

WO 2005/033633 A2

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